

DIRECT CHIP ATTACH STRUCTURE AND METHOD

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Abstract of the Disclosure

A method for forming a direct chip attach (DCA) device (1) includes attaching a chip (3) to a lead frame (2). Conductive studs (22) are attached to bonding pads (13) on the chip (3) and a flag (18) on lead frame (2). The chip (3) and flag (18) are enclosed with an encapsulating layer (4), and openings (6) are formed in an upper surface (7) to expose conductive studs (22). In one embodiment, a masking layer (51) is applied to the lead frame (2), and the structure is then placed in an electroless plating apparatus (61). While in the plating apparatus (61), an injection device (66) injects plating solution (71) towards the upper surface (7) and openings (6) to enhance the formation of barrier layers (24) on the conductive studs (22). Solder bumps (9) are then attached to barrier layers (24) through the openings (6).